

Business Case



For
***Enterprise Systems Services Centers
Project***

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Information Technology Services Division***

September 2007

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1 Executive Summary

Under Montana law (MCA 2-17-512) the Department of Administration, Information Technology Services Division (ITSD) has a responsibility to provide central data center services to State agencies. For many years the department has provided those services and State agencies and Montana citizens have become heavily dependent on computer systems, network facilities, and voice telecommunications facilities managed by ITSD. These facilities are currently housed in the basement of the Mitchell Building in Helena.

The Mitchell Building basement is unsatisfactory for housing this critical infrastructure for the following reasons:

- The building is old and at risk for seismic damage in the event of a significant earthquake.
- The east wing of the Mitchell Building, which houses the computer center in the basement, is poorly engineered
- Water pipes and communications and power cables are positioned side-by-side, making them vulnerable to any leak.
- Millions of dollars of sensitive electronic equipment is vulnerable to water collecting in the lowest portions of the building.
- The Mitchell Building was not designed with considerations for providing physical security. There are 14 exterior entrances to the building.
- The State is increasingly at risk of failing to meet federal HIPAA, IRS and Justice data sharing requirements because of shortcomings of the building, particularly those related to security.
- Since the Department of Revenue and other divisions of the Department of Administration also occupy the building public access is required. This requirement complicates security measures.

Members of the Legislative Audit Committee, Governor Brian Schweitzer, Chief of Staff Bruce Nelson, and Budget Director David Ewer have toured the data center and have expressed concerns about the current facilities and the need for secure, efficient facilities.

The Department was funded by the 2007 Legislature to construct two facilities:

1. A new ESSC building in Helena to house the primary Systems Services Center.
2. A remote ESSC facility in the eastern portion of Montana to provide operational capacity, redundant facilities to support critical services, accelerated back up processes and enhanced disaster recovery capabilities.

2 Project Purpose

Please keep in mind that many sections of this template have been collapsed. You will likely need more space than is provided in most sections. The template is expandable, so use the space required to provide the information you feel is necessary.

2.1 Purpose

2.2 Alignment with your Agency IT Plan, and Review of Enterprise Solutions

2.3 Traceability of Project Goals

2.4 Ensuring that Goals are Verifiable

3 Current Status

3.1 Current Situation

3.1.1 Business Situation

The State of Montana and Montana citizens are heavily dependent on computer systems, network facilities, and voice telecommunications facilities managed by ITSD. These facilities are currently housed in the basement of the Mitchell Building in Helena.

The Mitchell Building is old, much of it dating back to the 1940's, and wasn't designed to house a modern technical facility providing critical services to the State. The Mitchell Building is nearly impossible to secure, has structural vulnerabilities, outdated cooling and electrical power infrastructure, and we've essentially exhausted options for using the limited space available.

At the same time our agency customers businesses are demanding ever higher levels of reliability and availability. More and more applications are intolerant of any down time, making planned maintenance and recovery from unplanned outages increasingly difficult.

The time has come to make dramatic changes in the way ITSD delivers operations services to the State enterprise.

3.1.2 Current Roles and Responsibilities

The Department of Administration (ITSD) is responsible under Montana statute to provide data center services:

2-17-512. Powers and duties of department. (1) The department is responsible for carrying out the planning and program responsibilities for information technology for state government, except the national guard. The department:

- (a) shall encourage and foster the development of new and innovative information technology within state government;
- (b) shall promote, coordinate, and approve the development and sharing of shared information technology application software, management systems, and information that provide similar functions for multiple state agencies;
- (c) shall cooperate with the office of economic development to promote economic development initiatives based on information technology;
- (d) shall establish and enforce a state strategic information technology plan as provided for in 2-17-521;
- (e) shall establish and enforce statewide information technology policies and standards;
- (f) shall review and approve state agency information technology plans provided for in 2-17-523;
- (g) shall coordinate with the office of budget and program planning to evaluate budget requests that include information technology resources. The department shall make recommendations to the office of budget and program planning for the approval or disapproval of information technology budget requests, including an estimate of the useful life of the asset proposed for purchase and whether the amount should be expensed or capitalized, based on state

accounting policy established by the department. An unfavorable recommendation must be based on a determination that the request is not provided for in the approved agency information technology plan provided for in 2-17-523.

- (h) shall staff the information technology board provided for in 2-15-1021;
- (i) shall fund the administrative costs of the information technology board provided for in 2-15-1021;
- (j) shall review the use of information technology resources for all state agencies;
- (k) shall review and approve state agency specifications and procurement methods for the acquisition of information technology resources;
- (l) shall review, approve, and sign all state agency contracts and shall review and approve other formal agreements for information technology resources provided by the private sector and other government entities;
- (m) shall operate and maintain a central computer center for the use of state government, political subdivisions, and other participating entities under terms and conditions established by the department;
- (n) shall operate and maintain a statewide telecommunications network for the use of state government, political subdivisions, and other participating entities under terms and conditions established by the department;
- (o) shall ensure that the statewide telecommunications network is properly maintained. The department may establish a centralized maintenance program for the statewide telecommunications network.
- (p) shall coordinate public safety communications on behalf of all state agencies as provided for in 2-17-541 through 2-17-543;
- (q) shall manage the state 9-1-1 program as provided for in Title 10, chapter 4, part 3;
- (r) shall provide electronic access to information and services of the state as provided for in 2-17-532;
- (s) shall provide assistance to the legislature, the judiciary, the governor, and state agencies relative to state and interstate information technology matters;
- (t) shall establish rates and other charges for services provided by the department;
- (u) must accept federal funds granted by congress or by executive order and gifts, grants, and donations for any purpose of this section;
- (v) shall dispose of personal property owned by it in a manner provided by law when, in the judgment of the department, the disposal best promotes the purposes for which the department is established;
- (w) shall implement this part and all other laws for the use of information technology in state government;
- (x) shall report to the appropriate interim committee on a regular basis and to the legislature as provided in 5-11-210 on the information technology activities of the department; and
- (y) shall represent the state with public and private entities on matters of information technology.

The Department of Administration (A&E) has specific authority under Montana Statute: 18-2-105. General powers and duties of department of administration. In carrying out powers relating to the construction of buildings, the department of administration may:

- (1) inspect buildings not under construction;
- (2) contract with the federal government for advance planning funds;
- (3) transfer funds and authority to agencies and accept funds and authority from agencies;
- (4) purchase, lease, and acquire by exchange or otherwise, land and buildings in Lewis and Clark County and equipment and furnishings for the buildings;
- (5) issue and sell bonds and other securities;
- (6) maintain an inventory of all buildings;
- (7) appoint a project representative to supervise architects' and consulting engineers' inspection of construction of buildings to ensure that all construction is in accordance with the contracts, plans, and specifications. The cost of supervision may be charged against money available for construction.

(8) negotiate deductive changes, not to exceed 7% of the total cost of a project, with the lowest responsible bidder when the lowest responsible bid causes the project cost to exceed the appropriation or with the lowest responsible bidders, if multiple contracts will be awarded on the project, when the total of the lowest responsible bids causes the project cost to exceed the appropriation. A bidder is not required to negotiate a bid but is required to honor the bid for the time specified in the bidding documents. The department may terminate negotiations at any time. 18-2-112. Appointment of architects and consulting engineers. The department of administration shall appoint any architect or consulting engineer retained for work on any building to be constructed, remodeled, or renovated by the state of Montana, its boards, institutions, and agencies from a list of three architects or consulting engineers proposed by the state board, institution, or agency where the work is to be done. The department need not appoint an architect or consulting engineer for repair or maintenance projects.

3.1.3 Current Technical Situation

n/a

3.2 Current Issues

The Mitchell Building basement is unsatisfactory for housing critical infrastructure for the following reasons:

- The building is old and at risk for seismic damage in the event of a significant earthquake.
- The east wing of the Mitchell Building, which houses the computer center in the basement, is poorly engineered
- Water pipes and communications and power cables are positioned side-by-side, making them vulnerable to any leak.
- Millions of dollars of sensitive electronic equipment is vulnerable to water collecting in the lowest portions of the building.
- The Mitchell Building was not designed with considerations for providing physical security. There are 14 exterior entrances to the building.
- The State is increasingly at risk of failing to meet federal HIPAA, IRS and Justice data sharing requirements because of shortcomings of the building, particularly those related to security.
- Since the Department of Revenue and other divisions of the Department of Administration also occupy the building, public access is required. This requirement complicates security measures.

Members of the Legislative Audit Committee, Governor Brian Schweitzer, Chief of Staff Bruce Nelson, and Budget Director David Ewer have toured the data center and have expressed concerns about the current facilities and the need for secure, efficient facilities.

3.3 Current Performance Measurements

n/a

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4 Alternatives Considered

4.1 Alternative Selection

4.2 Decision Criteria

- Conformance to the design principles laid out in the Concept Document
- Consistency with the limitations inherent with the fund mechanism in the appropriation.
- Consistency with Governor's Office/OBPP position on flexibility and adaptability of the facilities.

4.3 Alternative 1

4.3.1 Outsource Operations

In this alternative, a contract would be established with an external party to provide ESSC facilities and operations. Typically, such an arrangement is reached to take advantage of economies of scale provided by an external party, which is typically providing like services for a number of clients as a for-profit business.

4.3.2 Estimated Implementation Cost

n/a

4.3.3 Estimated Recurring Cost

n/a

4.3.4 Evaluation vs. Decision Criteria

Economic Issues:

There are no potential providers with facilities in the Helena area, or elsewhere in Montana, to provide the capabilities described in the ESSC Concept Document. This means that private facilities would have to be built for the State or the processing would have to be performed at an existing facility out-of-state.

If custom facilities have to be constructed in Montana to meet the needs of the state it is difficult to understand how that could be done at a cost attractive to the State and still provide an appropriate return for the provider.

If the processing would be taken out of state, operating agreements with Federal agency partners, such as the US DOJ and IRS, would be jeopardized. In addition, a significant number of high paying jobs would be sent out-of-state.

In the absence of existing facilities in Montana to provide the processing services, out sourcing IT operations is neither practical nor economically feasible.

Operational Issues:

From a purely operational perspective, ITSD does not have a preference for lease or owning the facilities if the necessary characteristics for security, functionality, flexibility and cost are present. However, we believe these characteristics present significant challenges for private sector companies currently operating in Montana.

Security: While many private sector facilities provide very good security, the State's relationship with Federal government agencies (IRS, DOJ and HHS most prominently) place some very specific security requirements (such as "pan to pan" solid walls) on State operations that may be difficult for private sector providers to meet. Fingerprint background checks on non-State personnel with access to a building may be a problem if a facility is shared with other tenants. Setbacks from roads and parking, and other perimeter security may be very costly to a lease provider whose other tenants do not require those features.

Functionality: The "non-stop", redundancy requirements of the ESSC are shared by comparatively few businesses operating within the state. The ESSC is not simply a backup site. The ESSC sites process hundreds of thousands of transactions per day and support systems critical to the safety, health and welfare of Montana citizens. Our requirements are for "Tier IV" facilities with fully redundant power generation and distribution, communications and environmental systems.

Flexibility: The State's IT use is continually in a state of change, not only in terms of the technology used but in the scope of its use. State IT is continually responding to new demands from not only State government but Federal mandates and the public. Recognizing this, we believe the ESSC require significant flexibility to expand physical space when needed both quickly and with minimal cost. This may be a physical challenge for a lease provider and an issue complicated by relationships with multiple tenants in a shared facility.

Cost: In the case of the Helena ESSC there is presently no facility in place or planned approaching the size defined in the concept document. Any lease provided facility would have to be built to meet State requirements described briefly above and, more fully, in the concept document. It is difficult to imagine that a for-profit company could build such a facility, largely as a custom facility for the State, and achieve a reasonable profit level without significantly higher costs to the lessee compared to the State building a comparable facility as a "non-profit". To price it below reasonable profit levels would jeopardize the financial stability of the lease provider and, consequently, its ability to meet its long-term lease obligations to the State.

Rate Impact:

Operating expenses cannot be funded by the appropriation in HB4. The result of outsourcing ESSC facilities and operations is a significant increase in operating fixed cost for ITSD that would have corresponding effect on rates charged to agencies. This is especially the case for the Helena facility. The Department of Administration provides a fully-burdened fixed cost for State-owned space in the Helena area. For FY07 the rate is \$6.88 per ft². The cost of leasing space appropriate for an ESSC in the Helena area is estimated at nearly \$25.00 per ft². Clearly, this is a significant increase in cost that would fall to agency budgets and, based on current agency practices, disproportionately on the General Fund.

4.4 Alternative 2**4.4.1 Leased Facility**

In this alternative ITSD would operate the ESSC in facilities owned by, and leased from, a for-profit, external party. It differs from Alternative 1 in that ITSD would assume the operational responsibilities.

4.4.2 Estimated Implementation Cost

n/a

4.4.3 Estimated Recurring Cost

n/a

4.4.4 Evaluation vs. Decision Criteria

See Alternative 1 economic and operational issues evaluation.

Rate Impact:

Operating expenses cannot be funded by the appropriation in HB4. The result of a lease for ESSC facilities is a significant increase in operating fixed cost for ITSD that would have corresponding effect on rates charged to agencies. This is especially the case for the Helena facility. The Department of Administration provides a fully-burdened fixed cost for State-owned space in the Helena area. For FY07 the rate is \$6.88 per ft². The cost of leasing space appropriate for an ESSC in the Helena area is estimated at nearly \$25.00 per ft². Clearly, this is a significant increase in cost that would fall to agency budgets and, based on current agency practices, disproportionately on the General Fund.

4.5 Alternative 3

4.5.1 State-owned and Operated ESSC “Condominium” Facilities

In this alternative, the State would own and operated ESSC facilities that are part of a condominium-style property.

The State would hold title to a proportional share of the real property, which would satisfy the restrictions on HB4 appropriations

4.5.2 Estimated Implementation Cost

n/a

4.5.3 Estimated Recurring Cost

n/a

4.5.4 Evaluation vs. Decision Criteria

This alternative does not conform to the position of the Governor’s Office regarding flexibility and control of the facility. Typically, any changes to a facility require review and approval of the other owners of the property. The State’s need to have the ability to promptly expand the ESSC when needed is jeopardized by this requirement.

It is also likely that the security requirements of the State described above may not be applicable to other owners. Since meeting those requirements is certain to increase the cost of the facility, it may be difficult to find a facility meeting the State’s requirements.

4.6 Alternative 4

4.6.1 State-owned and Operated ESSC “Standalone” Facilities

In this alternative the State will own and operate ESSC facilities without involvement of other owners.

4.6.2 Estimated Implementation Cost

\$14.5 million was appropriated by the 2007 Legislature, including approximately \$2 million in one-time, non-real property expenses. This funding is a \$9.65 million reduction from the initial funding request and focused primarily on the Legislature’s reluctance to fund the office portions of the proposal.

4.6.3 Estimated Recurring Cost

The current estimate is \$350,000 annually for software and equipment maintenance. In addition, there will be a yet-to-be-determined cost associated with square footage charges from General Services Division. Once the design is completed the number of square feet to be occupied, as well the current square footage to be released by ITSD, will lead to the net cost impact.

4.6.4 Evaluation vs. Decision Criteria

- **Conformance to the design principles laid out in the Concept Document.** This alternative offer the best opportunity to meet the objectives laid out in the Concept Document for reliability, security and high availability.
- **Consistency with the limitations inherent with the fund mechanism in the appropriation.** This alternative permits use of the HB4 funding rather than forcing the large increase in operating costs of other alternatives.
- **Consistency with Governor's Office/OBPP position on flexibility and adaptability of the facilities.** This alternative provides maximum flexibility to adapt to the changing needs of the State promptly and without unnecessary, additional expenses.

5 Recommended Alternative

Alternative #4 above...

5.1 Rationale for Recommendation

- **Conformance to the design principles laid out in the Concept Document.** This alternative offer the best opportunity to meet the objectives laid out in the Concept Document for reliability, security and high availability.
- **Consistency with the limitations inherent with the fund mechanism in the appropriation.** This alternative permits use of the HB4 funding rather than forcing the large increase in operating costs of other alternatives.
- **Consistency with Governor's Office/OBPP position on flexibility and adaptability of the facilities.** This alternative provides maximum flexibility to adapt to the changing needs of the State promptly and without unnecessary, additional expenses.

5.2 Business Approach for Implementing Selected Method

There will be two-prong approach to this project.

- The design and construction of the physical facilities will be managed by the Department of Administration, Architecture & Engineering Division in a manner prescribed in Montana statute dealing with construction projects, and according to established procedures of the A&E Division.
- Once the design firm is engaged, we will determine whether services to manage the data center move project are contained within the contract engaging the design firm. If needed a separate project, tightly integrated with the construction, will be undertaken to plan and execute the move. Due to the specialized expertise required for a complex data center move, we expect that an RFP for those services will be issued if a separate project is warranted.

5.3 Technological Approach for Implementing Selected Method

n/a

6 Resource Requirements

6.1 Architectural & Engineering Design

6.1.1 Description

In this phase, the architects and engineers contracted by the Department of Administration, Architecture & Engineering Division will meet with management and technical personnel within ITSD and agencies to define design requirements and prepare the conceptual ESSC design.

This will most often be done using “charettes”, an architectural design technique similar to a focus group/workshop, to understand the needs and formulate alternatives.

6.1.2 Hardware

n/a

6.1.3 Software

n/a

6.1.4 Personnel

(Preliminary Estimate)

ITSD Staff:

ESSC team (fulltime)	3	100%	5 months
Charette participants	30	10%	5 months
Senior management review, etc.	4	20%	5 months
Agency charette participants	20	10%	5 months

6.1.5 Other

6.1.6 Recurring Operations and Support Requirements

n/a

6.1.7 Estimated Total Cost of Ownership (TCO)

n/a

6.1.8 Estimated Total Benefits of Ownership (TBO)

n/a

6.1.8.1 Tangible Benefits

6.1.8.2 Intangible Benefits

6.2 Component / Phase 1

6.2.1 Description

6.2.2 Hardware

6.2.3 Software

6.2.4 Personnel

6.2.5 Other

6.2.6 Recurring Operations and Support Requirements

6.2.7 Estimated Total Cost of Ownership (TCO)

6.2.8 Estimated Total Benefits of Ownership (TBO)

6.2.8.1 Tangible Benefits

6.2.8.2 Intangible Benefits

6.3 Component / Phase 1

6.3.1 Description

6.3.2 Hardware

6.3.3 Software

6.3.4 Personnel

6.3.5 Other

6.3.6 Recurring Operations and Support Requirements

6.3.7 Estimated Total Cost of Ownership (TCO)

6.3.8 Estimated Total Benefits of Ownership (TBO)

6.3.8.1 Tangible Benefits

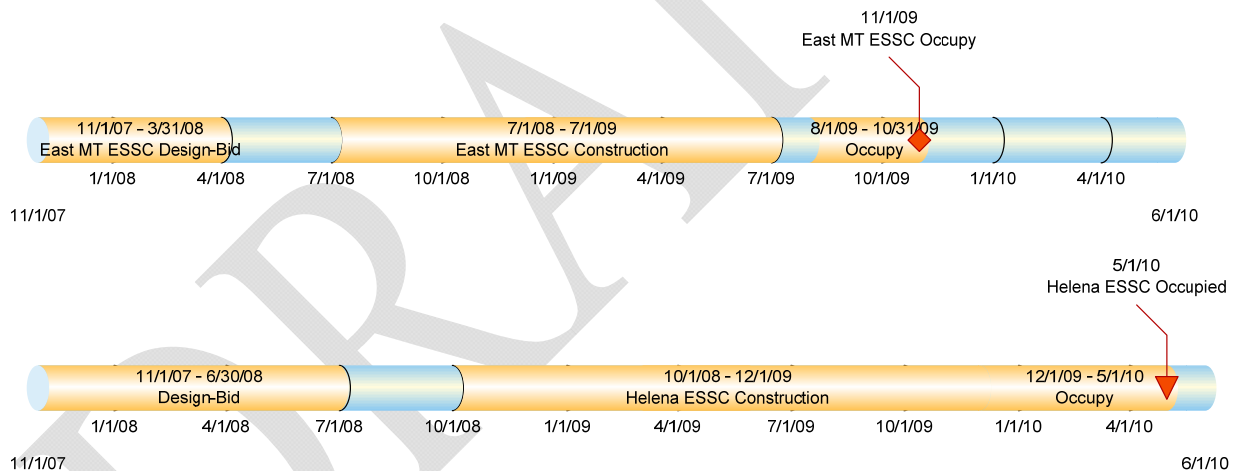
6.3.8.2 Intangible Benefits

7 Schedule

Moving ITSD services and staff out of the Mitchell Building is the foremost priority. To permit ITSD to occupy the new Helena facility as quickly as possible, ITSD and the Architecture and Engineering (A&E) Division can conduct conceptual design activities prior to full project approval by the 2007 Legislative session. This will allow detailed design and bid-letting to move forward immediately upon passage of bonding authority. A&E advises that under this scenario, the new Helena facility would likely be ready for occupancy during the winter 2009-2010.

Due to smaller size and lesser complexity of the remote facility, it's likely that it could be ready for occupancy earlier than the Helena ESSC. To minimize problems during the shakedown period of the Helena ESSC, we will likely move the equipment currently housed in the existing Billings site to the remote ESSC prior to occupying the new Helena site.

Preliminary Timetable



8 Cost Estimate

8.1 ESSC Construction

8.1.1 Hardware Costs

Budget constrained to \$1 million for data redundancy related equipment for critical systems redundancy in the two sites.

8.1.2 Software Costs

Budget constrained to \$250,000 for remote management software.

8.1.3 Personnel Costs

(Not covered by HB4 funding.)

8.1.4 Other Costs

Moving, furnishings, specialized consultants:	\$750,000
Design – Construction:	\$12,500,000

8.1.5 Recurring Operations and Support Costs

TBD – greatly dependant on design characteristics.

8.2 Estimated Total Cost of Ownership (TCO)

8.3 Estimated Total Benefits of Ownership (TBO)

9 Cost/Benefit Analysis

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10 Risk Assessment

Risk Management Process

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11 Verification

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